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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary****Application No.**

10/562,935

**Applicant(s)**

NISHIO, AKIHIKO

**Examiner**

PING Y. HSIEH

**Art Unit**

2618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 November 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 27-34 and 37-40 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 27-34 and 37-40 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-940)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 27-32, 37 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Larsson (U.S. PATENT NO. 5,956,642) in view of Speight (U.S. PATENT NO. 7,480,261) and further in view of Parantainen et al. (U.S. PATENT NO. 7,092,373).

-Regarding claims 27 and 30, Larsson discloses a base station (**base station 200, fig. 2A**) comprising an allocation unit configured to allocate an uplink resource (**allocator 916 as disclosed in fig. 8 and col. 18 lines 8-11**), comprising a frequency resource and a spreading code resource (**traffic segments as shown in fig. 2B**), to be used by a mobile station for transmitting (**uplink channels**); a modulating unit (**i.e., modulator 868, fig. 8**) configured to

modulate control information that is directed to the mobile station and that includes both first allocation information indicating the uplink the resource **(uplink and downlink channel allocations allocated by the allocator 916 is forwarded to modulator 868 as disclosed in fig. 8 and col. 18 lines 8-11)** and second allocation information that comprises downlink resource allocation information **(uplink and downlink channel allocations allocated by the allocator 916 is forwarded to modulator 868 as disclosed in fig. 8 and col. 18 lines 8-11)** and that indicates a destination of the user data **(voice and traffic channel assignments as disclosed in col. 7 lines 12-20)**; and a transmitting unit configured to transmit, to the mobile station, the modulated control information including the first allocation information and the second allocation information to be transmitted on a control channel **(the dedicated control channel is used to control or supervise the operation of mobile stations by means of information transmitted to and received from those units. Such information include incoming call signals, outgoing call signals, page signals, page response signals, location registration signals and voice and traffic channel assignments as disclosed in col. 7 lines 12-20)**, and configured to transmit, to the mobile station, the user data on a user channel **(traffic channel as disclosed in col. 7 line 12)**.

However, Larsson fails to specifically disclose the first allocation information and the second allocation information is simultaneously transmitted.

Speight discloses transmitting USCH (Uplink Shared Channel) and DSCH (Downlink Shared Channel) using the "PHYSICAL SHARED CHANNEL ALLOCATION" message (220) in fig. 2 and col. 3 lines 32-62.

Therefore, it would have been obvious to one of ordinary skills in the art at the time of invention to modify the channel allocation as disclosed by Larsson to include the features as disclosed by Speight. One is motivated as such in order to provide a plurality of composite transport channels to be allocated with a single physical shared channel allocation message (see Speight, col. 2 lines 24-35).

However, the combination of Larsson and Speight fails to specifically disclose the resource is to be used for transmitting an ACK/NACK signal in response to user data transmitted by the base station.

Parantainen et al. disclose the base station transmits information on the uplink channel to be used for acknowledgements as disclosed in fig. 4.

Therefore, it would have been obvious to one of ordinary skills in the art at the time of invention to modify allocated resource of Larsson and Speight to be used for transmitting an ACK/NACK signal. One is motivated as such in order to make sure the data is successfully transmitted.

-Regarding claims 28 and 31, the combination further discloses the resource comprises a subcarrier **(Larsson, subcarriers f0-f6 as shown in fig. 2B).**

-Regarding claims 29 and 32, the combination further discloses an encoding unit configured to encode the first allocation information together with the second allocation information (**Larsson, channel encoder 866, fig. 8**).

-Regarding claims 37 and 38, Laroia discloses a base station (**base station 200, fig. 2A**) comprising: an allocation unit configured to allocate an uplink resource (**allocator 916 as disclosed in fig. 8 and col. 18 lines 8-11**), comprising a frequency resource and a spreading code resource (**traffic segments as shown in fig. 2B**), to be used by a mobile station for transmitting (**uplink channels**); an encoding unit (**i.e., channel encoder 866, fig. 8**) configured to encode first allocation information indicating the uplink resource (**channel encoder 866 as disclosed in col. 16, lines 40-60**) together with second allocation information that comprises a downlink resource allocation information (**channel encoder 866 as disclosed in col. 16, lines 40-60**) and that indicates a destination of the user data to provide control information including the encoded first and second allocation information that is directed to the mobile station (**voice and traffic channel assignments as disclosed in col. 7 lines 12-20**); a modulating unit (**i.e., modulator 868, fig. 8**) configured to modulate the control information (**uplink and downlink channel allocations allocated by the allocator 916 is forwarded to modulator 868 as disclosed in fig. 8 and col. 18 lines 8-11**); and a transmitting unit configured to transmit, to the mobile station, the modulated control information, including the encoded first and second allocation information, on a control channel (**the dedicated control**

**channel is used to control or supervise the operation of mobile stations by means of information transmitted to and received from those units. Such information include incoming call signals, outgoing call signals, page signals, page response signals, location registration signals and voice and traffic channel assignments as disclosed in col. 7 lines 12-20) and configured to transmit, to the mobile station, the user data on a user channel (traffic channel as disclosed in col. 7 line 12).**

However, Larsson fails to specifically disclose the first allocation information and the second allocation information is simultaneously transmitted.

Speight discloses transmitting USCH (Uplink Shared Channel) and DSCH (Downlink Shared Channel) using the "PHYSICAL SHARED CHANNEL ALLOCATION" message (220) in fig. 2 and col. 3 lines 32-62.

Therefore, it would have been obvious to one of ordinary skills in the art at the time of invention to modify the channel allocation as disclosed by Larsson to include the features as disclosed by Speight. One is motivated as such in order to provide a plurality of composite transport channels to be allocated with a single physical shared channel allocation message (see Speight, col. 2 lines 24-35).

However, the combination of Larsson and Speight fails to specifically disclose the resource is to be used for transmitting an ACK/NACK signal in response to user data transmitted by the base station.

Parantainen et al. disclose the base station transmits information on the uplink channel to be used for acknowledgements as disclosed in fig. 4.

Therefore, it would have been obvious to one of ordinary skills in the art at the time of invention to modify allocated resource of Larsson and Speight to be used for transmitting an ACK/NACK signal. One is motivated as such in order to make sure the data is successfully transmitted.

4. Claims 33 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Larsson (U.S. PATENT NO. 5,956,642) in view of Speight (U.S. PATENT NO. 7,480,261), Parantainen et al. (U.S. PATENT NO. 7,092,373) and further in view of Khan (U.S. PG-PUB NO. 2004/0179493).

-Regarding claims 33 and 34, the combination teaches all the limitations as claimed in claims 27 and 30. However, the combination fails to specifically disclose a generating unit configured to generate transmit power information of the ACK/NACK signal, wherein said modulating unit modulates the transmit power information, and said transmitting unit simultaneously transmits the modulated first allocation information, the modulated second allocation information and the modulated power information on the control channel.

Khan disclose a generating unit configured to generate transmit power information of the ACK/NACK signal, wherein said modulating unit modulates the transmit power information, and said transmitting unit simultaneously transmits the modulated first allocation information, the modulated second allocation information and the modulated power information on the control channel (**see paragraph 40**).



Therefore, it would have been obvious to one of ordinary skills in the art at the time of invention to modify the combination of Larsson, Speight and Parantainen et al. to include the features as disclosed by Khan. One is motivated as such in order to provide improve resource efficiency.

5. Claims 39 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Larsson (U.S. PATENT NO. 5,956,642) in view of Speight (U.S. PATENT NO. 7,480,261), Parantainen et al. (U.S. PATENT NO. 7,092,373) and further in view of Li et al. (U.S. PG-PUB NO. 2002/0119781).

-Regarding claims 39 and 40, the combination of Larsson, Speight and Parantainen teaches all the limitations as claimed in claims 27 and 30. However, the combination fails to specifically disclose a measuring unit configured to measure a channel quality between the base station and the mobile station, wherein said allocating unit allocates the uplink resource based on the channel quality.

Li discloses a measuring unit configured to measure a channel quality between the base station and the mobile station, wherein said allocating unit allocates the uplink resource based on the channel quality (**paragraph 27-28**).

Therefore, it would have been obvious to one of ordinary skills in the art at the time of invention to modify the combination of Larsson, Speight and Parantainen et al to include the features as disclosed by Li et al. One is motivated as such in order to improve resource allocation.

***Response to Arguments***

Applicant's arguments with respect to claims 27-34 and 37-40 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PING Y. HSIEH whose telephone number is (571)270-3011. The examiner can normally be reached on Monday~Thursday 8am ~ 4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lana N. Le can be reached on 571-272-7891. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/PING Y HSIEH/  
Examiner, Art Unit 2618

/Lana N. Le/  
Primary Examiner, Art Unit 2614